

**REMARKS**

Upon entry of this amendment, claims 2-19 are all the claims pending in the application.

Claims 18 and 19 are added as new claims. No new matter has been added.

**I. Claim Rejections under 35 U.S.C. § 103(a)**

Claims 2-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Albrecht et al. (U.S. 6,239,685) in view of Lueker et al. (U.S. 4,504,809). Applicant respectfully traverses this rejection on the following basis.

Regarding independent claim 2, the Examiner recognizes that neither Albrecht nor Lueker teaches the specific combination of elements recited therein. Nonetheless, the Examiner alleges that one of ordinary skill in the art would have been motivated to combine the teachings of Albrecht and Lueker and arrive at the claimed invention. Applicant respectfully disagrees.

Albrecht discloses a micromechanical switch having a beam 101 that is able to deflect upwardly and downwardly to thereby open and close the switch (see Figs. 1a and 1b). The beam 101 is composed of two materials (A and B) having different coefficients of thermal expansion (see Fig. 2A and col. 5, lines 29-32). By heating target regions 111 and 112 on beam 101, preferably by a laser beam, the beam 101 transitions between an opened state as shown in Fig. 1a and a closed state as shown in Fig. 1B (col. 5, lines 23-51).

Lueker, on the other hand, discloses a relay utilizing both thermal and magnetic components. In particular, Lueker discloses a relay having heating elements 206 and 208 which rest on a substrate 204, which in turn rests on a magnet 202 (see Figs. 2 and 3). A moving

element 210 is provided having contacts 212 and 214 which form connections with contacts 216 and 218, respectively (see Figs. 2 and 3). By providing current to heating elements 206 and 208, the moving element 210 is able to rock back and forth about pivot point 220. For example, if the moving element is in the position shown in Fig. 2 and current is provided to heating element 208, as the temperature of heating element 208 increases, the moving element pivots to the right such that contact is made between elements 214 and 218.

Based on the foregoing description of Albrecht and Lueker, it is clear that each reference provides a separate and distinct means for actuating a switch. In Albrecht, a beam 101 is provided composed of different materials such that when heat is applied to the beam in different locations, the beam is able to deflect upwardly and downwardly. In Lueker, a moving element 210 is provided along with a pair of heating elements 206 and 208 such that when the respective heating elements are heated, the moving element can pivot between a first and second position.

The Examiner alleges that it would have been obvious to combine the teachings of Albrecht and Lueker and create a microswitch with both a thermal and magnetic actuation system (i.e., to use the actuation systems of both Albrecht and Lueker on a single device). Contrary to the assertion in the grounds of rejection, as both Albrecht and Lueker provide independent actuation systems which are not described to be deficient in any manner, there is simply no reason that one of ordinary skill in the art would be motivated to provide the actuation systems of both Albrecht and Lueker on a single device. Indeed, such redundancy would serve no apparent purpose and would result in a complex and expensive structure.

The alleged motivation for providing a switch with the actuation systems of both Albrecht and Lueker is to “yield reliable operation and to increase the switch response time.” (See Office Action at page 3). This proffered motivation, however, is conclusory and wholly unsupported by the prior art. Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be “clear and particular.” See *Winner*, 202 F.3d at 1348 (emphasis added).

Here, the motivation set forth in the grounds of rejection is neither “clear and particular” nor does it flow from the prior art. Trying to yield reliable operation and increase switch response time is a goal pursued in every single switch design but does not provide a reasonable explanation as to why a skilled artisan would have been motivated to combine Albrecht and Lueker and arrive at the specific combination of elements recited in claim 2. Indeed, nothing in Albrecht or Lueker or some other teaching from the prior art even remotely suggests that such a combination would have been desirable.

Most if not all inventions arise from a combination of old elements. *In re Kotzab*, 55 U.S.P.Q.2d at 1316 (citing *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998)). Thus, every element of a claimed invention may often be found in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *Id.*, emphasis added. Therefore, while the Examiner may have succeeded in locating certain features of the claimed invention in isolation,

the Examiner has pointed to no teaching, suggestion or motivation which would have led one of ordinary skill in the art to combine Albrecht and Lueker in the manner claimed.

Indeed, the Examiner has not provided any evidence or explanation as to how a switch would be constructed incorporating the actuation systems of both Albrecht and Lueker. Nor has the Examiner provided a reasonable explanation as to why one of ordinary skill in the art would construct a switch utilizing the actuation systems of both Albrecht and Lueker. Rather, it appears as though the Examiner has improperly used Applicant's disclosure to, in hindsight, pick and choose claimed features from the prior art.

However, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988, emphasis added). As discussed above, the Examiner's alleged motivation for combining Albrecht and Lueker is to provide reliable operation and increase switch response time. First, Applicant submits that there is no factual evidence in the prior art suggesting that the switches disclosed by either Albrecht or Lueker are unreliable. Second, Applicant submits that there is also no factual evidence in the prior art suggesting that the combination of Albrecht and Lueker would provide increased switch response time.

Accordingly, it appears as though the Examiner is relying on personal knowledge by asserting that the one of ordinary skill in the art would be motivated to combine Albrecht and Lueker in order provide reliable operation and increased switch response time. As set forth in MPEP 2144.03, when a rejection is based on facts within the personal knowledge of the examiner, the data should be stated as specifically as possible, and the facts must be supported,

when called for by the applicant, by an affidavit from the examiner. See 37 CFR 1.104(d)(2).

Therefore, because the Examiner appears to be relying on facts within the Examiner's personal knowledge in making this rejection, if the Examiner elects to maintain this rejection, Applicant respectfully requests that the Examiner provide an affidavit in support thereof in accordance with 37 C.F.R. § 1.104(d)(2).

Based on the foregoing, Applicant respectfully submits that a prima facie case of obviousness has not been established and kindly requests that the Examiner reconsider and withdraw the rejection of claim 2. Claims 3-7, 11-13, 16 and 17 depend from claim 2 and therefore incorporate all of the features thereof. Accordingly, Applicant submits that these claims are patentable at least by virtue of their dependency.

In addition, claim 5 (as amended) recites the feature of a first heating device formed on the armature. As discussed above, Albrecht teaches the desirability of utilizing a laser beam that is directed toward specific locations on beam 101 (see col. 5, lines 24-51) and Lueker makes no mention of a heating element formed on an armature. Indeed, Albrecht specifically teaches away from the use of a heating element formed on beam 101 (see col. 5, lines 39-51). Accordingly, as neither Albrecht nor Lueker teaches the desirability of providing a heating element on an armature, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 5.

Regarding independent claims 8, 10 and 14, the Examiner asserts that it would have been obvious to one of ordinary skill in the art to combine Albrecht and Lueker for the same reasons discussed above regarding claim 2. Accordingly, Applicant submits claims 8, 10 and 14 are

patentable at least for reasons analogous to those discussed above. Claim 9 depends from claim 8 and claim 15 depends from claim 14. Accordingly, Applicant submits that these claims are patentable at least by virtue of their dependency.

## **II. New Claims**

Claims 19 and 20 are added as new claims. Claim 19 depends from independent claim 10 and claim 20 depends from independent claim 14. Accordingly, Applicant submits that these claims are patentable at least by virtue of their dependency. In addition, claims 19 and 20 both recite the feature of a first heating element formed on an armature and, therefore, are considered patentable for the same reasons as discussed above regarding claim 5.

## **III. Conclusion**

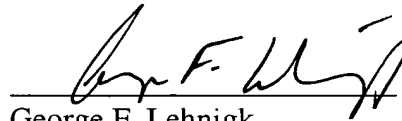
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment Under 37 C.F.R. § 1.111  
U.S. Application No.: 09/883,220

Attorney Docket No.: Q65032

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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